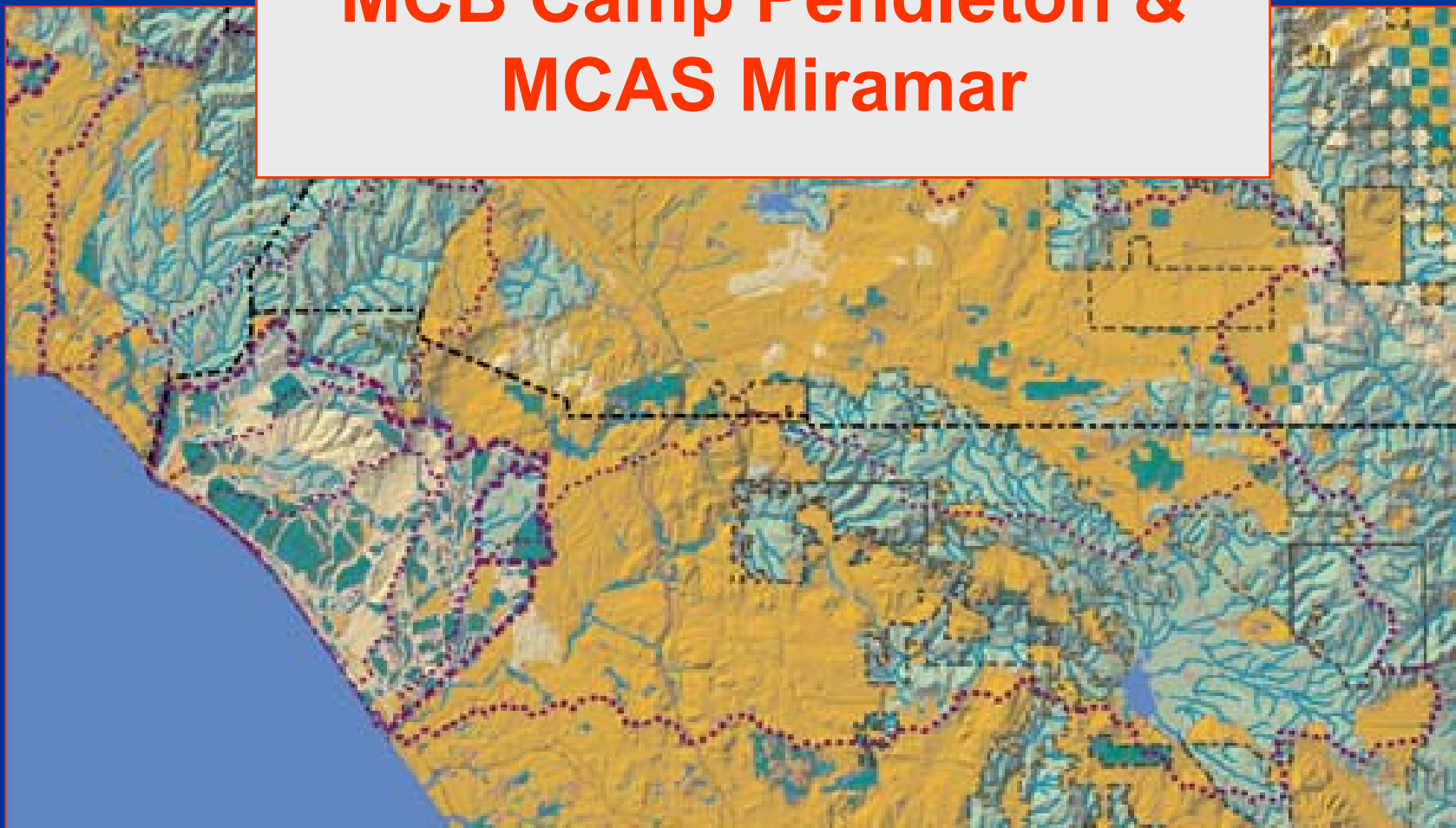


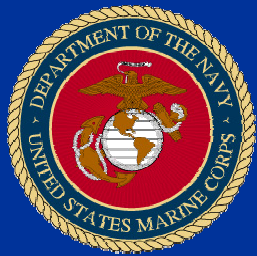


# LANDSCAPE FUTURES:

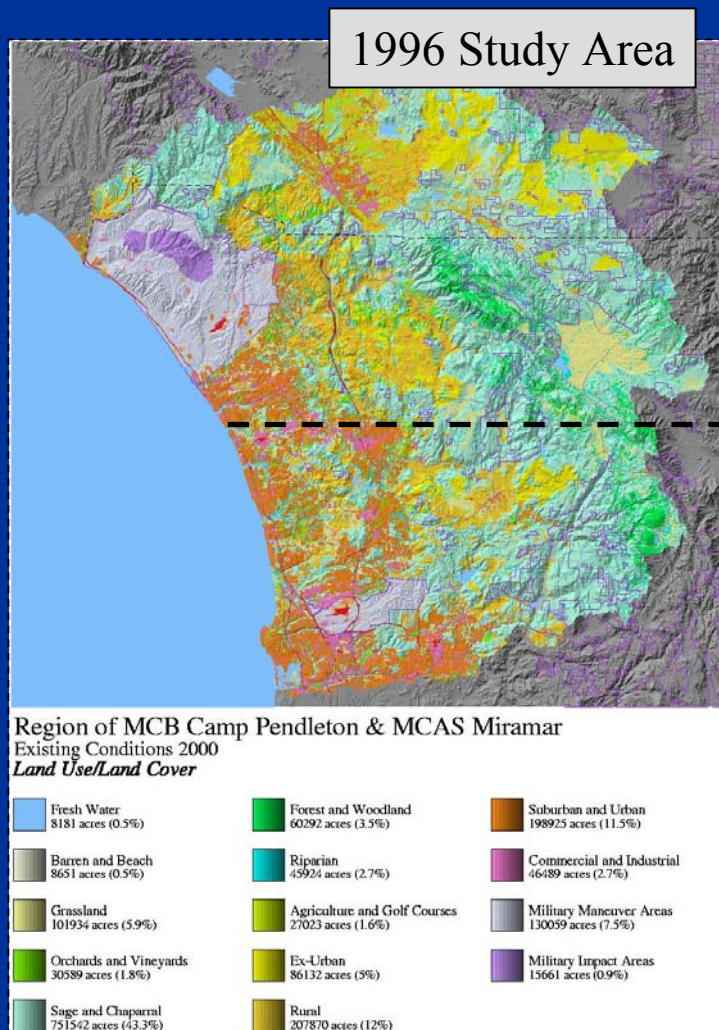
Region including  
**MCB Camp Pendleton &  
MCAS Miramar**



Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>01 AUG 2004</b>		2. REPORT TYPE <b>N/A</b>		3. DATES COVERED <b>-</b>	
4. TITLE AND SUBTITLE <b>LANDSCAPE FUTURES:Region includingMCB Camp Pendleton &amp; MCAS Miramar</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
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12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release, distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>See also ADM002111. Department of Defense Conservation Conference. Held in Savannah, Georgia on August 22-27, 2004, The original document contains color images.</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>UU</b>	18. NUMBER OF PAGES <b>11</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



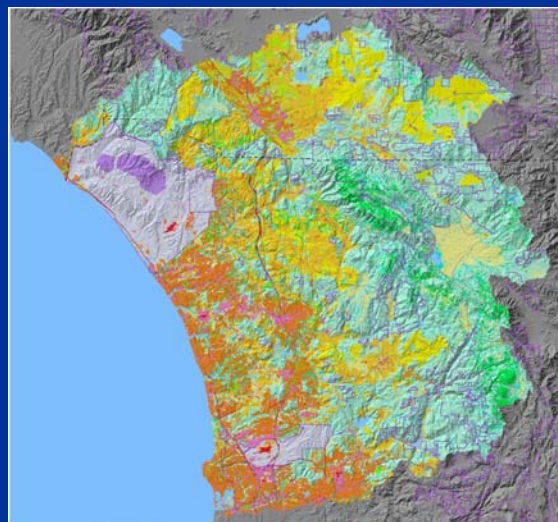
# Study Parameters



- POPULATION INCREASE
  - 500,000
  - 1,000,000
- UNCERTAINTIES
  - Water
  - Energy
  - Mass Transportation
  - Acceptance of high-density living
  - Public value of conservation



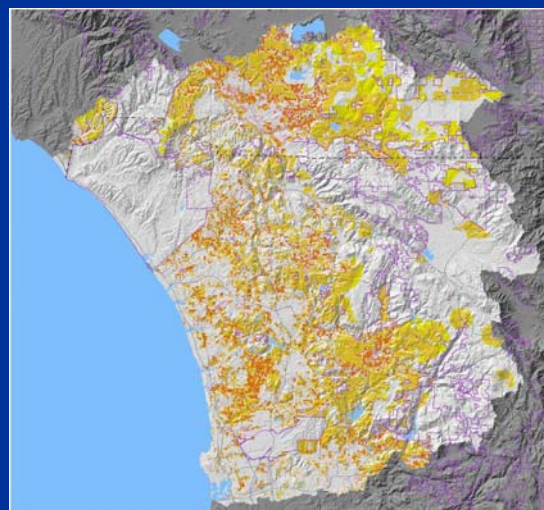
# Regional Low Density (Plus 1,000,000 Population)



Region of MCB Camp Pendleton & MCAS Miramar  
Existing Conditions 2000  
*Land Use/Land Cover*

Fresh Water 8181 acres (0.5%)	Forest and Woodland 60292 acres (3.5%)	Suburban and Urban 198923 acres (11.5%)
Barren and Beach 8651 acres (0.5%)	Riparian 45924 acres (2.7%)	Commercial and Industrial 46289 acres (2.7%)
Grassland 101934 acres (5.9%)	Agriculture and Golf Courses 27023 acres (1.6%)	Military Maneuver Areas 130299 acres (7.3%)
Orchards and Vineyards 30589 acres (1.8%)	Ex-Urban 86132 acres (5%)	Military Impact Areas 15661 acres (0.9%)
Sage and Chaparral 751542 acres (43.3%)	Rural 207820 acres (12%)	

**Baseline 2000**



Regional Low-Density Future  
1,000,000 New Residents  
*New Development*

Ex-Urban 68602 acres (4%)
Rural 337447 acres (19.5%)
Suburban 85823 acres (5%)
Urban 14796 acres (0.9%)
Commercial 11779 acres (0.7%)

**Projected Change**



Regional Low-Density Future  
1,000,000 New Residents  
*Land Use/Land Cover*

Fresh Water 8181 acres (0.5%)	Forest and Woodland 60292 acres (3.5%)	Suburban and Urban 198923 acres (11.5%)
Barren and Beach 8651 acres (0.5%)	Riparian 45924 acres (2.7%)	Commercial and Industrial 46289 acres (2.7%)
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Sage and Chaparral 751542 acres (43.3%)	Rural 207820 acres (12%)	

**Cumulative Result**





# Alternative Futures '04

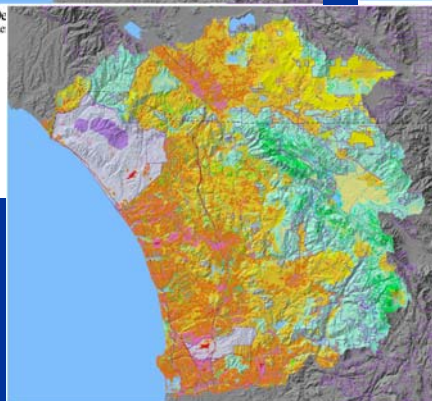
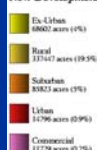
**Reg Low-Density**

**Coastal**

**Northern**

**Three Centers**

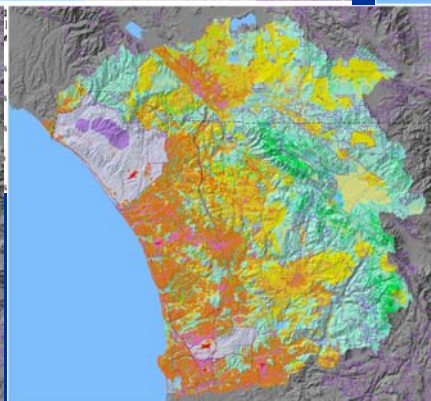
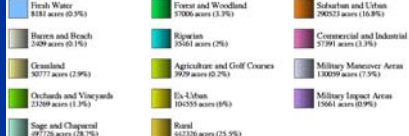
Regional Low-Density  
1,000,000 New Residents  
New Development



Regional Low-Density Future

1,000,000 New Residents

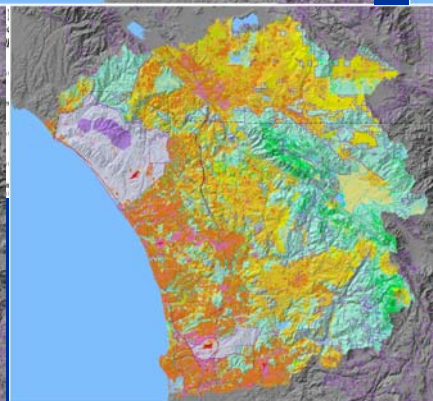
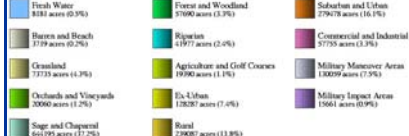
Land Use/Land Cover



Coastal Future

1,000,000 New Residents

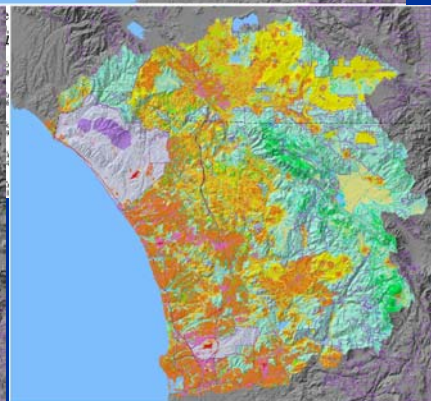
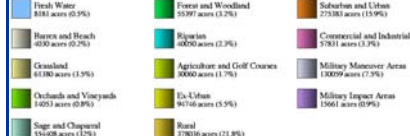
Land Use/Land Cover



Northern Future

1,000,000 New Residents

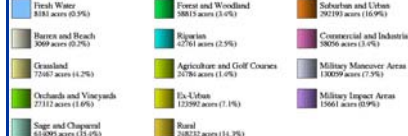
Land Use/Land Cover



Three-Centers Future

1,000,000 New Residents

Land Use/Land Cover

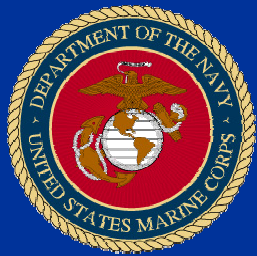




# Percentage of Habitat on USMC Lands



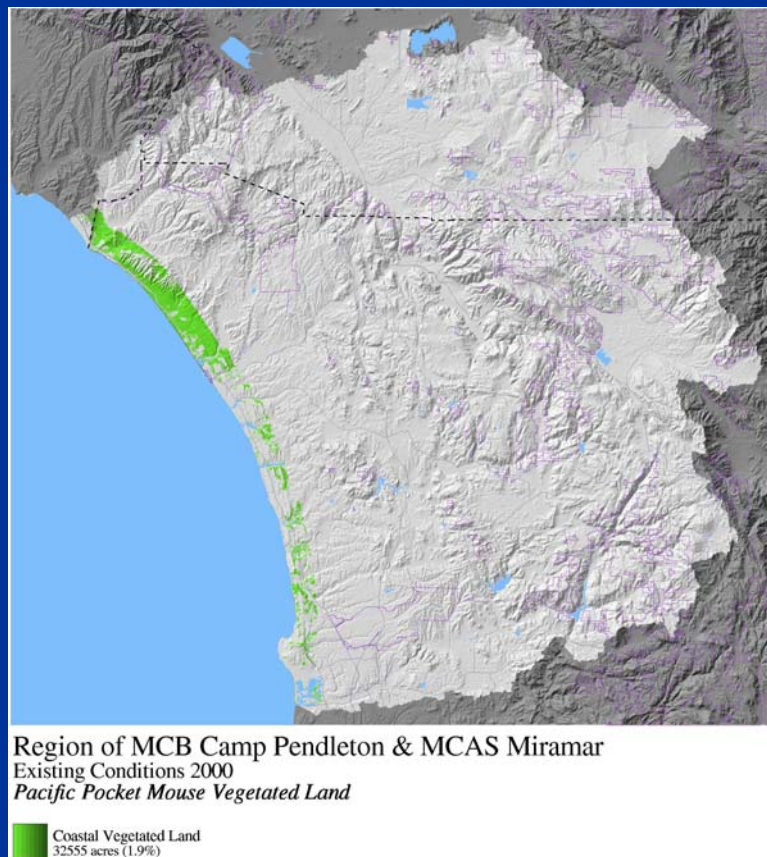
<b>SPECIES</b>	<b>2000</b>	<b>Coastal</b>	<b>Northern</b>	<b>Reg Low-Density</b>	<b>Three Centers</b>
Fairy Shrimp	70.1	81.7	79.1	82.3	70.1
Ca gnatcatcher	33.1	37.7	36.6	50.4	34.0
Western snowy plover	45.3	47.3	46.9	46.4	45.3
SW willow flycatcher	18.2	19.8	21.2	23.9	20.1
Least Bells vireo	15.9	17.5	18.5	20.8	17.6
Cougar	9.5	10.3	12.1	12.4	10.9
Argentine ant	5.4	4.0	3.2	3.2	3.7



# Conservation Potential

- Recovery Plan Objectives

- Pacific pocket mouse
- Stephens kangaroo rat
- Vernal Pool species
- Arroyo toad

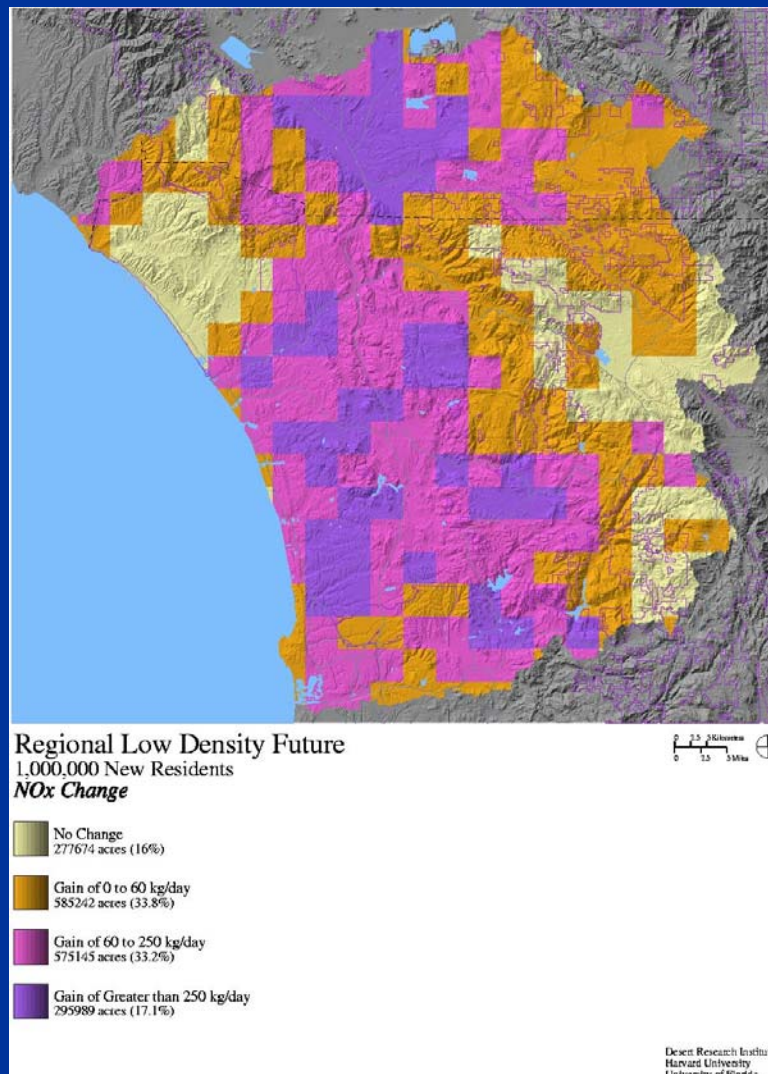






# Associated Products

- Air Quality
  - Assessment
  - Predictive Model







# Predicted Max Ozone (ppb) Values

(5 simulations and episode days)

Simulations	July 7		July 8		July 9		July 10		July 11	
	Max O <sub>3</sub>	Diff.	Max O <sub>3</sub>	Diff.	Max O <sub>3</sub>	Diff.	Max O <sub>3</sub>	Diff.	Max O <sub>3</sub>	Diff.
Base Case	115	-	132	-	129	-	135	-	121	-
Coastal Future (1,000k)	128	13	134	2	136	7	143	8	128	7
Northern Future (1,000k)	138	23	134	2	142	13	146	11	133	12
Regional Low Density Future (1,000k)	150	35	134	2	142	13	146	11	137	16
Three Centers Futures (1,000k)	139	24	134	2	141	12	146	11	134	13



# 1996/2004 Assessments

## Landscape Ecological Pattern

1996 Study

2004 Study

Base-line 1990  
1,702,000

Baseline 2000  
1,998,000

Build-Out 2030  
+1 Million

+1 Million  
(est +750,000 by 2020)



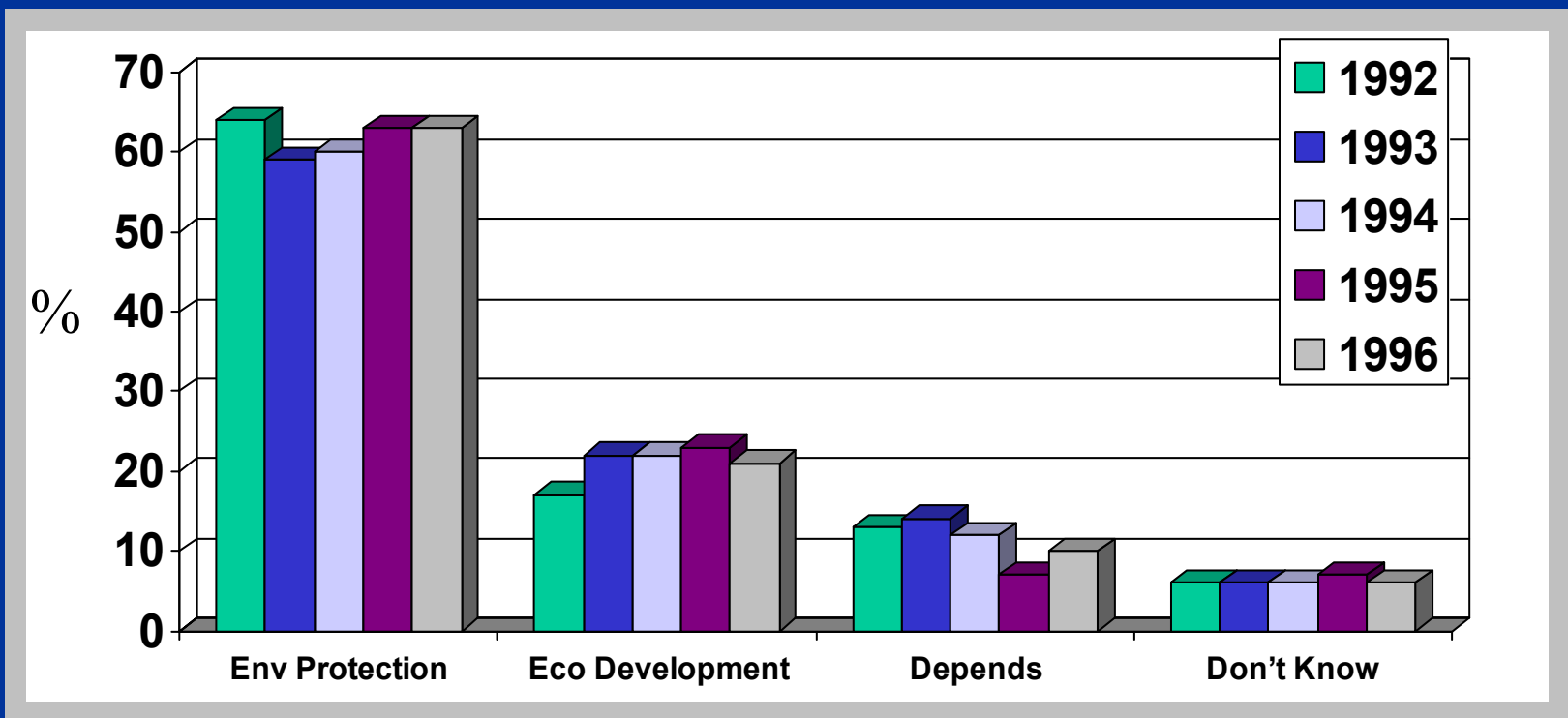
Isolated Natural Vegetation  
Contiguous Natural Vegetation  
Built Landscape

Fresh Water 8181 acres (0.5%)	Forest and Woodland 57006 acres (3.3%)	Suburban and Urban 290323 acres (16.8%)
Barren and Beach 2409 acres (0.1%)	Riparian 35461 acres (2%)	Commercial and Industrial 37391 acres (3.3%)
Grassland 50777 acres (2.9%)	Agriculture and Golf Courses 3929 acres (0.2%)	Military Maneuver Areas 130099 acres (7.5%)
Orchards and Vineyards 23269 acres (1.3%)	Ex-Urban 104555 acres (6%)	Military Impact Areas 15661 acres (0.9%)
Sage and Chaparral 497726 acres (28.7%)	Rural 442326 acres (25.5%)	



# Environment Vs. Development

*When it is impossible to find a reasonable compromise between economic development and environmental protection, which do you usually believe is more important: economic development or environmental protection?*



National Environmental Education and Training Foundation  
The Fifth Annual Survey of Adult Americans  
December 1996



